NAVY TRAINING SYSTEM PLAN

FOR THE

AN/AQS-20A

SONAR MINE DETECTING SET

N75-NTSP-P-30-0305/I

SEPTEMBER 2003

AN/AQS-20A SONAR MINE DETECTING SET

EXECUTIVE SUMMARY

This Initial Navy Training System Plan (NTSP) for the AN/AQS-20A Sonar Mine Detecting Set, hereafter referred to as the AN/AQS-20A, was developed using the Training Planning Process Methodology. This document provides an early estimate of manpower, personnel, and training requirements to support the employment concepts currently being considered. It also contains appropriate data required to make accurate decisions and assessments concerning manpower and training alternatives for the AN/AQS-20A.

The AN/AQS-20A is an evolutionary development of the AN/AQS-20 Sonar Mine Detecting Set. The AN/AQS-20A will be deployed from the MH-60S Multi Mission Helicopter and will be used for high-speed mine hunting and mine identification in waters with a suspected mine threat. The system sensors are housed in an underwater towed body, which can maintain operator-selected depths below the surface or heights above the bottom. The acoustic sensors are designed for the detection, classification, and localization of bottom, close-tethered, and in-volume sea mines in both deep and shallow water regions. The identification sensors are designed to acquire previously detected and localized bottom mine-like objects and then identify those bottom mine-like objects during Post Mission Analysis. AN/AQS-20A mission data will be used for mine avoidance or follow-on mine neutralization missions. The AN/AQS-20A will provide an Organic Airborne Mine Countermeasures capability to the Carrier Battle Group and Amphibious Ready Group and provide an improved mine hunting capability to the dedicated Airborne Mine Countermeasures (AMCM) Forces. This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Operating Area. The Legacy AN/AQS-20 Program entered the Engineering and Manufacturing Development Phase (now System Development and Demonstration Phase) in Fiscal Year (FY) 92. An Acquisition Decision Memorandum for the AN/AQS-20 Low-Rate Initial Production and for the AN/AQS-20A Engineering and Manufacturing Development was signed 15 November 2000. The Acquisition Category (ACAT) assigned is ACAT II. The Milestone C Decision Point for the AN/AQS-20A is planned for second quarter FY05. Initial Operational Capability is currently scheduled for first quarter FY06.

The maintenance concept for the AN/AQS-20A will be based on the three levels of maintenance, Organizational Level (O-Level), Intermediate Level (I-Level), and Depot Level (D-Level) as stated in the Naval Aviation Maintenance Program, Chief of Naval Operations Instruction 4790.2H. It is expected that Aviation Electronics Technicians (AT), Navy Enlisted Classification (NEC) code 83XX, assigned to Helicopter Combat Support (HC) and Helicopter Mine Countermeasures (HM) squadrons, as MH-60S AMCM Systems Maintenance Technicians Organizational and Intermediate Level, will perform O-Level and I-Level maintenance on the AN/AQS-20A. These billets do not currently exist in the HC squadrons and will have to be established. AT O-Level and I-Level MH-53E AMCM systems maintenance billets currently exist in the HM squadrons, it is expected that these will convert to MH-60S AMCM systems maintenance billets to support the HM community's transition to the MH-60S. A new NEC code 83XX will be required to identify MH-60S AMCM systems maintenance personnel. Aviation Ordnancemen (AO) NEC code 8378 that will be assigned to the HC squadrons will perform

aircraft mission configuration and mission certification. AO maintenance billets do not currently exist in the HC deployable squadrons and will have to be established. AOs NEC code 8378 that will be assigned to the HM squadrons Aircraft Maintenance Department Work Center (W/C) 230 will perform aircraft mission configuration and certification. Additionally ATs NEC code 83XX, MH-60S AMCM Systems Maintenance Technicians Organizational and Intermediate Level will be assigned to W/C 230 to provide maintenance support for the AN/AQS-20A when installed and while in their custody. Factory Technical Representatives will provide support when needed. It is expected that the manufacturer will perform D-Level maintenance.

Operations Specialists (OS) that are assigned to the HM squadrons conduct AMCM Mission Planning, Post Mission Analysis, and operate AMCM Command, Control, Communications, Computers, and Intelligence (C4I) systems. It is expected that this manning concept will not change. Currently these OSs receive no AMCM specific follow-on training or NEC. This NTSP outlines a planned Stand-Alone course that will support the OS training requirements. Additionally, an On The Job Training awardable NEC code that will identify their AMCM specific qualifications is planned. Personnel requirements for conducting Mission Planning, Post Mission Analysis, and the operation of AMCM C4I systems for the HC squadrons are currently being evaluated.

The AN/AQS-20A mission will require an operator manning of four: AMCM qualified pilot, co-pilot, and two enlisted aircrewmen (System Operator and Winch Operator). It is expected that the AN/AQS-20A will require no additional operator billets above those identified in current HC and HM Activity Manpower Documents. It is expected additional O-Level and I-Level maintenance billets within the HC squadrons will be required to support the AN/AQS-20A and additional MH-60S Airborne Mine Countermeasures Systems. Additional instructor billets may be required to support AN/AQS-20A follow-on training requirements. A Manpower Estimate Report (MER) is currently under development by Commander Naval Air Systems Command (Code AIR 3.2.6) Patuxent River, Maryland. Results of the MER will be identified in future updates of this NTSP.

Follow-on maintenance training for mission configuration personnel will be conducted at Maintenance Training Unit (MTU) –1044, Naval Station (NS) Norfolk, Virginia and MTU-1022, Naval Air Station (NAS) North Island, California. Follow-on AN/AQS-20A maintenance training for the AMCM systems technicians will be conducted at MTU-1044, NS Norfolk and MTU-1022, NAS North Island**.** It is anticipated operator training will be conducted at the Fleet Replacement Squadrons located at HC-3 NAS North Island and HC-2 NS Norfolk. Follow-on training for squadron tactics (Mission Planning/Post Mission Analysis) personnel is under review and will be included in future updates to this NTSP.

The AN/AQS-20A is one of five AMCM sensor/weapon systems being developed for deployment aboard the MH-60S aircraft. The additional sensor/weapon systems are the Airborne Laser Mine Detection System (ALMDS), Rapid Airborne Mine Clearance System (RAMICS), Organic Airborne and Surface Influence Sweep (OASIS), and the Airborne Mine Neutralization System (AMNS). Individual NTSPs are in development for each of these systems.

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LIST OF ACRONYMS

ACAT	Acquisition Category
AE	Aviation Electrician's Mate
AIMD	Aircraft Intermediate Maintenance Department
ALSP	Acquisition Logistics Support Plan
AM	Aviation Structural Mechanic
AMCM	Airborne Mine Countermeasures
AMTCS	Aviation Maintenance Training Continuum System
AO	Aviation Ordnanceman
ARG	Amphibious Ready Group
AT	Aviation Electronics Technician
BITE	Built-In Test Equipment
C4I	Command, Control, Communications, Computers, and Intelligence
CAD/CAC	Computer Aided Detection/Computer Aided Classification
CBT	Computer Based Training
CC	Common Console
CIN	Course Identification Number
CNO	Chief of Naval Operations
COMOPTEVFOR	Commander Operational Test and Evaluation Force
CSE	Common Support Equipment
CSTRS	Carriage, Stream, Tow, and Recovery System
CT	Contractor Testing
CVBG	Carrier Battle Group
D-Level	Depot Level
DT	Developmental Test
DT&E	Developmental Test and Evaluation
EOID	Electro-Optic Identification
FRS	Fleet Replacement Squadrons
FY	Fiscal Year
HC	Helicopter Combat Support
HM	Helicopter Mine Countermeasures
ICW	Interactive Courseware
I-Level	Intermediate Level
ILTE	Intermediate Level Test Equipment
LORA	Level of Repair Analysis

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LIST OF ACRONYMS

MEDAL	Mine Warfare Environmental Decision Aid Library
MER	Manpower Estimate Report
MLO	Mine Like Object
MP	Maintenance Plan
MTU	Maintenance Training Unit
NAMP	Naval Aviation Maintenance Program
NAMTRAU	Naval Air Maintenance Training Unit
NAS	Naval Air Station
NEC	Navy Enlisted Classification
NS	Naval Station
NSWCCSS	Naval Surface Warfare Center Coastal Systems Station
NTSP	Navy Training System Plan
O-Level	Organizational Level
OJT	On-the-Job Training
OPEVAL	Operational Evaluation
OPNAV	Office of the Chief of Naval Operations
OPNAVINST	Office of the Chief of Naval Operations Instruction
OPO	OPNAV Principal Official
OT	Operational Test
OT&E	Operational Test and Evaluation
PEO LMW	Program Executive Officer Littoral and Mine Warfare
PMA	Program Manager, Air
PMS	Program Manager, Surface
PSE	Peculiar Support Equipment
PUB	Power-Up Built-In Test
RFOU	Ready For Operational Use
RFT	Ready For Training
S&TE	Support and Test Equipment
SRA	Shop Replaceable Assemblies
TBD	To Be Determined
TD	Training Device
TECHEVAL	Technical Evaluation
TEMP	Test and Evaluation Master Plan
TRPPM	Training Planning Process Methodology
TTE	Technical Training Equipment

LIST OF ACRONYMS

VSS	Volume Search Sonar
W/C	Work Center
WRA	Weapons Replaceable Assembly

AN/AQS-20A SONAR MINE DETECTING SET

PREFACE

This Initial Navy Training System Plan (NTSP) is an early look at the AN/AQS-20A Sonar Mine Detecting Set program. This is the first iteration of the Initial NTSP for the AN/AQS-20A Sonar Mine Detecting Set program. The data contained in this iteration does not represent the official Manpower Personnel and Training requirements of the program. This document explores the various employment and support alternatives currently under consideration. This NTSP is a product of the Training Planning Process Methodology, as outlined in OPNAV publication P-751-3-9-97.

PART I - TECHNICAL PROGRAM DATA

A. TITLE-NOMENCLATURE-PROGRAM

1. **Title-Nomenclature-Acronym.** AN/AQS-20A, Sonar Mine Detecting Set.

2. **Program Element.** 0604373N

B. SECURITY CLASSIFICATION

1. **System Characteristics** ..... Confidential
2. **Capabilities** ..... Confidential
3. **Functions** ..... Confidential

C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS

OPNAV Principal Official (OPO) Program Sponsor .....CNO (N752)

OPO Resource Sponsor.....CNO (N759)

Development Agency..... PEO LMW (PMS210)

Training Agency .....COMLANTFLT
COMPACFLT
NETC

Training Support Agency.....NAVAIR (PMA205)

Manpower and Personnel Mission Sponsor.....CNO (N12)
NAVPERSCOM (PERS-4, PERS-404)

Director of Naval Training..... CNO (N00T)

D. SYSTEM DESCRIPTION

1. Operational Uses. The AN/AQS-20A Sonar Mine Detecting Set will be deployed from the MH-60S Multi Mission Helicopter and will be used for high-speed mine hunting and mine identification in waters with a suspected mine threat. The system sensors are housed in an underwater towed body, which can maintain operator-selected depths below the surface or heights above the bottom. The acoustic sensors are designed for the detection, classification, and localization of bottom, close-tethered, and volume sea mines. The identification sensors are designed to acquire previously detected and localized bottom mine-like objects and then identify those bottom mine-like objects during Post Mission Analysis. AN/AQS-20A mission data will be used for mine avoidance or follow-on mine neutralization missions. The AN/AQS-20A is one of five AMCM sensor/weapon systems being developed for deployment aboard the MH-60S aircraft. The additional sensor/weapon systems are the Airborne Laser Mine Detection System (ALMDS), Rapid Airborne Mine Clearance System (RAMICS), Organic Airborne and Surface Influence Sweep (OASIS), and the Airborne Mine Neutralization System (AMNS). Individual NTSPs are in development for each of these systems.

2. Foreign Military Sales. There are no plans for Foreign Military Sales.

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST.

1. Developmental Test and Evaluation (DT&E)/Contractor Testing (CT) To Date.

- **Initial Tow Test (CT/DT-IIA).** CT/DT-IIA was completed in July 1997 at Naval Surface Warfare Center Coastal Systems Station (NSWCCSS) Panama City, Florida. The Engineering Development Model hydrodynamic stability was verified, Sonar data set for evaluation and refinement of the system Computer Aided Detection/Computer Aided Classification (CAD/CAC) was acquired, and system interfaces and procedures were validated.

- **Second Tow Test (CT/DT-IIB).** CT/DT-IIB was conducted at NSWCCSS in two phases. The test periods, April through November 1998 and April through July 1999, encompassed more than 60 missions and 73 tow hours. The system CAD/CAC and localization algorithms were refined in extensive testing against bottom, close-tethered, and volume targets in shallow and deep-water depths. Additionally, refinement of the system interfaces, procedures, supportability, and maintainability continued.

- **Contractor Tests (CT/DT-IIC).** CT/DT-IIC was conducted at NSWCCSS in July 1999. System performance was evaluated against the performance specification and the AN/AQS-20 was certified ready for Operational Assessment by the Program Executive Officer Littoral and Mine Warfare (PEO LMW). Current system CT is scheduled for the first quarter of Fiscal Year (FY) 04.

- **Combined (DT-IID/OT-IIA).** DT-IID/OT-IIA was conducted in April 2000 by Commander Operational Test and Evaluation Force (COMOPTEVFOR), with support provided by NSWCCSS. Over 30 flight hours were achieved with missions completed in both shallow

water (Single Pass Shallow Mode) and deep water (Single Pass Deep, Volume Modes). COMOPTEVFOR recommended approval for continued program development.

2. Future DT&E.

- **CT/DT-IIE through DT-III.** These tests will be structured into two incremental phases, DT-IIE and DT-IIF Technical Evaluation (TECHEVAL). DT-IIE will consist of shipboard Tow Testing and Contractor Tests from the MH-53E. TECHEVAL will consist of testing the AN/AQS-20A production representatives for performance testing and Operational Requirements Document (ORD) and Test and Evaluation Master Plan (TEMP) compliance. TECHEVAL will be conducted from the MH-60S.

3. Operational Test and Evaluation (OT&E) To Date.

- **OT&E Events and Results.** An Operational Assessment OT-IIA was performed by COMOPTEVFOR during the second and third quarters of FY00. The test period encompassed 10 sorties and 34.9 flight hours. Sorties were flown at various shallow and deep-water ranges against operationally realistic minefields containing threat representative moored and bottom Mine Like Objects (MLO). Fleet representative tactics were employed. COMOPTEVFOR recommended continued program development of the AN/AQS-20.

4. Future OT&E.

- **OT-IIB Operational Evaluation (OPEVAL).** OPEVAL will be conducted to determine operational effectiveness and operational suitability, support tactics development and make a recommendation regarding Fleet introduction. Follow-on OT&E, as required, will be conducted to verify correction of deficiencies, to complete deferred or incomplete OT&E, to continue tactics development, and to verify the operational effectiveness and suitability of a production model AN/AQS-20A. OPEVAL will be performed using one production representative AN/AQS-20A towed body (and one backup) from an AMCM configured MH-60S helicopter with one AMCM configured backup MH-60S, if available. The system will be maintained and operated by Fleet personnel using full acquisition logistics support. The test period will encompass approximately 22 sorties and 44 flight hours. Sorties will be flown at various shallow and deep-water ranges against operationally realistic minefields containing threat representative moored and bottom MLOs. Scenarios will be developed based on the threats identified by the Office of Naval Intelligence. Fleet representative tactics will be employed to provide realistic tests to support resolution of the operational effectiveness and operational suitability Critical Operational Issues of the AN/AQS-20A. OPEVAL is currently scheduled to commence second quarter FY05.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED. The AN/AQS-20A will not replace any existing system.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. The AN/AQS-20A is an evolutionary development of the AN/AQS-20. The primary developmental differences between the AN/AQS-20A and the AN/AQS-20 are the addition of the Electro-Optic Identification (EOID) sensor and integration to the MH-60S helicopter. Adding the EOID capability is being accomplished by replacing the Volume Search Sonar (VSS) module with an EOID module. Integration of the EOID has promulgated moving the processing to the internal components of the towed body, which also translates to airborne console modifications. In general, the towed body envelope, weight, external components, and flight control software will not change significantly. The AN/AQS-20A will be integrated into the MH-60S through the use of the aircraft AMCM Mission Kit (Figure I-1) consisting of the Common Console (CC), Carriage, Stream, Tow, and Recovery System (CSTRS), and Tow Cable. Refer to the MH-60S NTSP for the aircraft AMCM Mission Kit information.

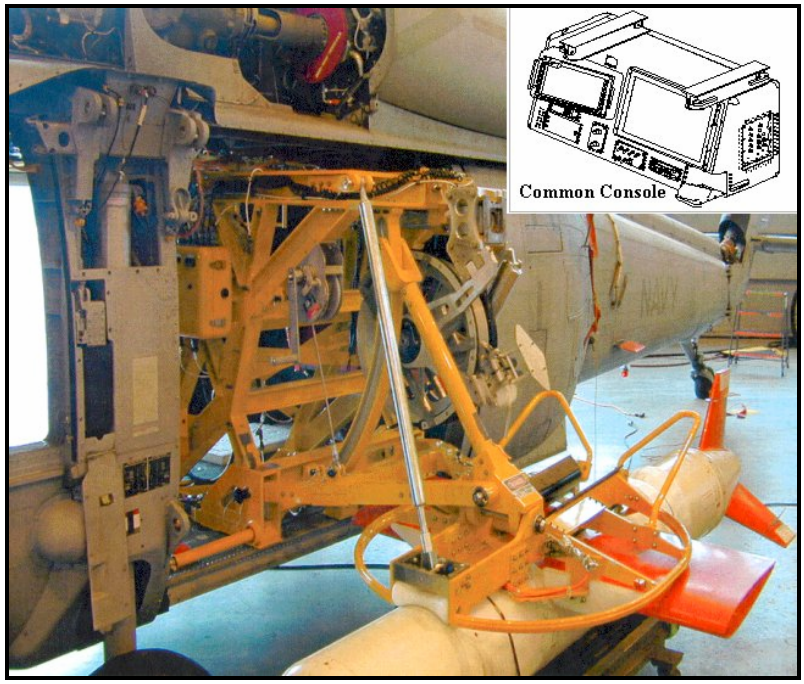

FIGURE I-1

a. AN/AQS-20A Towed Body. The towed body (Figure I-2) is actively controlled providing a stable platform for the mine reconnaissance sensors and capable of both depth-specified and altitude-specified operation. The towed body has two sensor configurations. The first sensor configuration consists of acoustic sensors designed for the detection, classification, and localization of bottom and close-tethered and volume MLOs, in either shallow or deep water, using five active Sonar arrays. The five active Sonars are: the port and starboard Side-Look Sonars, the Gap Filler Sonar, Forward Looking Sonar, and the VSS. The second sensor

configuration replaces the VSS with an EOID sensor for identification of bottom targets. The towed body also houses navigational and environmental sensors.

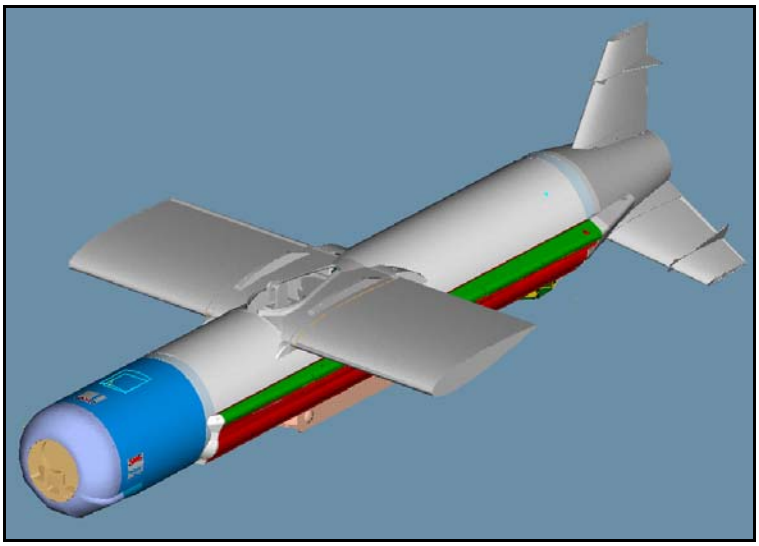

FIGURE I-2

2. Physical Description. The table below identifies the physical dimensions of the Towed Body. Refer to the MH-60S NTSP for the aircraft AMCM Mission Kit information.

AN/AQS-20A SYSTEM PHYSICAL DIMENSIONS		
COMPONENT	**WEIGHT (POUNDS)**	**SIZE (HEIGHT x WIDTH x DEPTH)**
Sonar Towed Body		
- VSS Installed	977.0	* 30” x 60” x 125”
- EOID Installed	976.0	* 30” x 60” x 126”

* Sonar Towed Body dimensions with wings and fins installed.

3. New Development Introduction. The AN/AQS-20A is an evolutionary development of the AN/AQS-20. The system is considered new production.

4. Significant Interfaces. The AN/AQS-20A and its computer resources will interface electrically and will be compatible with the following:

a. MH-60S helicopter

b. Aircraft AMCM Mission Kit

5. New Features, Configurations, or Material. The AN/AQS-20A will provide an extension of the AMCM mine hunting capability to deeper depths and improvements in volume mine detection and classification. The CAD/CAC capability will enhance Sonar data and improve Post Mission Analysis capabilities and the addition of the EOID sensor will provide a capability to identify bottom targets.

H. CONCEPTS

1. Operational Concept. The AN/AQS-20A will provide Organic AMCM capabilities to the CVBG/ARG and provide an improved mine hunting capability to AMCM dedicated Forces. The AN/AQS-20A will be used in conjunction with moored and influence mine sweeping systems. The AN/AQS-20A is capable of detecting, classifying and localizing unburied bottom mines, close tethered, and volume mines in shallow and deep water. The AN/AQS-20A will identify unburied bottom mines. The system can be used independently to provide mine reconnaissance, mine surveillance, and to provide data on bottom characteristics. The normal operating crew will consist of an MH-60S AMCM Pilot, Co-pilot, and two enlisted aircrewmen (System Operator and Winch Operator). As with all AMCM systems, the AN/AQS-20A is modular in design and can be readily installed in or removed from the helicopter as mission requirements dictate. Mission planning will be conducted utilizing Mine Warfare Environmental Decision Aid Library (MEDAL) and the Navy H60 Mission Planning Station. Post Mission Analysis will be conducted on the AN/AQS-20A Post Mission Analysis Station initially, then on the AMCM Common Post Mission Analysis Station.

2. Maintenance Concept. The maintenance concept for the AN/AQS-20A will be based on the three levels of maintenance, Organizational Level (O-Level), Intermediate Level (I-Level), and Depot Level (D-Level) as stated in the Naval Aviation Maintenance Program (NAMP), Office of the Chief of Naval Operations Instruction (OPNAVINST) 4790.2H. The Level of Repair Analysis (LORA) determines the exact maintenance level for repairable items. The AN/AQS-20A system LORA has been conducted using the Navy Joint Aviation Model. Results of this preliminary LORA dated March 2001 are contained in Appendix-C of the AN/AQS-20A Acquisition Logistics Support Plan (ALSP). Description for each level of maintenance is as follows:

a. Organizational. O-Level maintenance will be performed in the work center or on the flight line. O-Level maintenance is limited to aircraft mission configuration, pre and post mission equipment inspections/certifications, cleaning and corrosion control, minor flight line repairs, and troubleshooting using Built-In Test Equipment (BIT) to the Weapons Replaceable Assembly (WRA) level. It is expected that Aviation Electronics Technicians (AT) with a new Navy Enlisted Classification (NEC) code 83XX, MH-60S Airborne Mine Countermeasures Systems Maintenance Technicians Organizational and Intermediate Level will be assigned to Helicopter Combat Support (HC) and Helicopter Mine Countermeasures (HM) squadrons and will perform O-Level and I-Level maintenance on the AN/AQS-20A. Additionally, they will be trained to perform O-Level and I-Level maintenance as required on all the MH-60S AMCM systems. These billets do not currently exist in the HC squadrons and will have to be established. Aviation Ordnancemen (AO) NEC code 8378 will perform aircraft mission configuration and certification. AO maintenance billets do not currently exist in the HC

squadrons and will have to be established. Additionally ATs NEC code 83XX, MH-60S AMCM Systems Maintenance Technicians Organizational and Intermediate Level attached to HM squadrons will be assigned to Work Center (W/C) 230 to provide maintenance support for the AN/AQS-20A when installed and while in their custody. This maintenance concept is supported by the AMCM mission systems maintenance program outlined in the NAMP, OPNAVINST 4790.2H.

(1) Preventive Maintenance. Preventive Maintenance at the O-Level normally occurs between missions and includes limited scheduled maintenance consisting of pre and post-mission inspections, operational readiness testing, and corrosion control. Post-mission system corrosion control includes freshwater wash down, inspection, and cleaning of the Towed Body and inspection and cleaning of all associated WRAs.

(2) Corrective Maintenance. Corrective maintenance actions at the O-Level will include fault isolation to the WRA level, using Power-Up Built-In Test (PUB), Operator Initiated Built-In Test (OIB), or manual troubleshooting methods, removal and replacement of faulty WRAs, and verification of satisfactory corrective maintenance actions, and adjustment or alignment as required as authorized at the O-Level.

b. Intermediate. I-Level maintenance will be performed on all WRAs and Shop Replaceable Assemblies (SRA) beyond the O-Level maintenance capability. I-Level maintenance consists of fault isolation of defective WRAs and SRA by using Common Support Equipment (CSE) and Peculiar Support Equipment (PSE), replacing faulty SRA and components, and verifying corrective action via the appropriate CSE and PSE. When deployed away from supporting Aircraft Intermediate Maintenance Department (AIMD) I-Level trained squadron maintenance personnel will perform AN/AQS-20A system I-Level maintenance. I-Level Test Equipment (ILTE) is expected to be small and lightweight to facilitate portability. The squadrons and supporting AIMDs will be outfitted with the necessary CSE, PSE, repair parts and consumables to support authorized maintenance. Detailed information on AIMD locations, CSE, and PSE will be identified when the information becomes available.

Note: It is expected that O-Level and I-Level trained ATs NEC 83XX will be assigned to MH-60S squadrons and supporting AIMDs as MH-60S AMCM systems maintenance technicians to provide AN/AQS-20A O-Level and I-Level maintenance support.

c. Depot. Raytheon Company Electronic Systems Naval and Maritime Integrated Systems, Portsmouth, Rhode Island will provide D-Level maintenance support for the AN/AQS-20A. Systems and components will be returned to the depot for repair in accordance with the Maintenance Plan (MP).

d. Interim Maintenance. Currently no interim maintenance is planned.

e. Life Cycle Maintenance Plan. The service life of the AN/AQS-20A is limited by component deterioration. Maintenance requirements and component life cycle data is based on data obtained from the supportability analysis, Reliability Centered Maintenance and LORA results. All life cycle data from testing will be compiled and preventive maintenance requirements designed to extend the life cycle will be provided prior to Fleet introduction.

3. Manning Concept. As a result of an analysis of the operator, maintenance, and tactics related tasks associated with the AN/AQS-20A and its supporting equipment, it has been determined these tasks will be within the capabilities of the Navy's existing enlisted rating and Navy Officer Billet Classification structures. Based on current program information it is anticipated introduction of the AN/AQS-20A will require no additional operator billets above those identified in current HC and HM Activity Manpower Documents. Based on the results of a base line comparison conducted during the development of this NTSP utilizing current AMCM systems maintenance support information, it is expected that additional O-Level and I-Level maintenance billets will be required within the HC squadrons and AIMDs to support the maintenance requirements of the AN/AQS-20A. It is expected that existing AT NEC 8391 maintenance billets will convert to MH-60S AMCM systems maintenance support billets when the HM squadrons transition to the MH-60S and its associated AMCM systems. Additional instructor billets may be required to support AN/AQS-20A training requirements. This will not be determined until detailed training and student throughput information becomes available. Actual manpower requirements will not be available until a Manpower Estimate Report (MER) for the MH-60S squadrons supporting AMCM becomes available.

Note: A MER is currently under development by Commander Naval Air Systems Command (Code AIR 3.2.6) Patuxent River, Maryland. Results of the MER will be identified in future updates of this NTSP.

a. Estimated Maintenance Man-Hours per Operating Hour. Estimated Maintenance Man-Hours per Operating Hour for each affected work center will be identified from the development of the MER. Once complete, the results will be identified in an update to this NTSP. Information from the table below is being utilized in the development of the MER. Table below was taken from the AN/AQS-20A TEMP.

CHARACTERISTIC/PARAMETER	UNITS	THRESHOLD	OBJECTIVE
Mean Time Between Operational Mission Failures, Hardware	Hours	17	20
Mean Time Between Operational Mission Failures, Software	Hours	300	600
Mean Corrective Maintenance Time for Operational Mission Failures Hardware (O-Level)	Hours	1.0	0.5
Mean Corrective Maintenance Time for Operational Mission Failures Software (O-Level)	Hours	0.8	0.4
Mean Reboot Time	Minutes	2	1
Mean Time Between Unscheduled Maintenance	Hours	14	17
Daily Scheduled Maintenance	Hours	1.3	1.0
Mean Time Between Preventative Maintenance	Hours	Four 2-hr missions	Four 3-hr missions

CHARACTERISTIC/PARAMETER	UNITS	THRESHOLD	OBJECTIVE
Installation of the AN/AQS-20A system	Hours	4	2
Installation of the identification sensor	Hours	6	3
PUB to detect over 95% of the faults	Minutes	Less than 5	Less than 1
OIB Time to isolate the detected fault to a single WRA at a rate of 95%	Minutes	Less than 10	N/A
Probability of False Alarm during OIB	%	2	N/A

b. Proposed Utilization. Average sortie length is expected to be approximately two hours and 30 minutes. System utilization has currently not been identified.

c. Recommended Qualitative and Quantitative Manpower Requirements. Based on the MH-60S NTSP N88-NTSP-A-50-9902A/A, current AN/AQS-20A program information, and baseline comparisons conducted, it is expected the AN/AQS-20A will not require additional operator billets. New O-Level AO, NEC code 8378 and O-Level and I-Level AT, NEC code 83XX maintenance billets may be required.

(1) Operator. Refer to the MH-60S NTSP N88-NTSP-A-50-9902A/A.

(2) Maintenance. It is expected that new maintenance billets may be required to support O-Level and I-Level maintenance requirements for the AN/AQS-20A. These O-Level and I-Level ATs will be assigned to the squadrons and supporting AIMDs specifically trained to support the O-Level and I-Level maintenance requirements for all the MH-60S AMCM systems. It is anticipated that they will be identified as MH-60S AMCM Systems Maintenance Technician Organizational and Intermediate Level, NEC code 83XX. Additionally, AOs NEC code 8378 will perform aircraft mission configuration and certification. AO maintenance billets currently do not exist in the deployable HC squadrons. These billets will have to be established. This maintenance-manning concept is supported by the NAMP, OPNAVINST 4790.2H. Detailed maintenance manpower information is currently not available. The tables below detail current and proposed qualitative manning information.

Note: The O-Level AOs may be assigned to the CVBG MH-60s squadrons as a result of the Combat Search and Rescue (Armed Helo) requirement. Refer to the H-60 Armed Helicopter NTSP N88-NTSP-A-50-9805/A.

HM AMCM SYSTEMS MAINTENANCE SUPPORT					
CURRENT MH-53E			PROPOSED MH-60S		
RATE	**NEC**	**W/C**	**RATE**	**NEC**	**W/C**
AD	8391	16A	AO	8378	230
AE	8391	16B	AT	83XX	230/16B
AM	8391	230/16A	-	-	-
AO	0000	230	-	-	-
AT	8391	16B	-	-	-

HC AMCM SYSTEMS MAINTENANCE SUPPORT					
CURRENT H-46			PROPOSED MH-60S		
RATE	**NEC**	**W/C**	**RATE**	**NEC**	**W/C**
None	-	-	AO	8378	230
None	-	-	AT	83XX	210

Note: With the current and future development of MH-60S deployable AMCM systems, the need for a specific NEC code identifying those personnel trained and qualified to maintain these systems may be required. Currently the HM community utilizes NEC code 8391, AMCM Systems Maintenance Technician Organizational and Intermediate Level to identify personnel trained to maintain AMCM systems and mission equipment. These personnel support both O-Level and I-Level maintenance requirements.

(3) Tactics. Operations Specialists (OS) are assigned to and conduct AMCM Mission Planning and Post Mission Analysis and operate AMCM Command, Control, Communications, Computers, and Intelligence (C4I) systems for the HM squadrons. It is expected that this manning concept will not change. Currently these OSs receive no AMCM specific follow-on training or NEC. This NTSP outlines a planned Stand-Alone course that will provide AMCM specific tactics training. Additionally, an On-the-Job Training (OJT) awardable NEC code 03XX, AMCM Operations Specialist that will identify their AMCM specific qualifications is planned. This Stand-Alone course along with the OJT will ensure these personnel receive the training and skills necessary to meet the commands operational commitments. Personnel requirements for conducting Mission Planning, Post Mission Analysis, and the operation of AMCM C4I systems for the HC squadrons are currently being evaluated. HC and HM operators (pilots and aircrewmen) will receive AMCM mission tactics training from a segment course within the operator track.

4. Training Concept. The AN/AQS-20A training program will consist of initial and follow-on training for TECHEVAL and OPEVAL personnel, instructors, Fleet operators, maintenance technicians, and tactics personnel. Initial training for TECHEVAL and OPEVAL personnel, instructors, Fleet operators, and maintenance technicians will be accomplished by both government and contractor support. Follow-on training for operators (pilots and aircrewmen) will be conducted at the MH-60S Fleet Replacement Squadrons (FRS) HC-3 Naval Air Station (NAS) North Island, California and HC-2 Naval Station (NS) Norfolk, Virginia. Follow-on maintenance training for mission configuration personnel (AOs) will be conducted at Naval Air Maintenance Training Unit, Maintenance Training Unit (MTU) -1044, NS Norfolk and MTU-1022, NAS North Island. Follow-on AN/AQS-20A maintenance training for the AMCM systems technicians (ATs) will be conducted at MTU-1044, NS Norfolk and MTU-1022 NAS North Island. Training for HM tactics (Mission Planning/Post Mission Analysis) personnel will be provided through a Stand-Alone course at a location and activity To Be Determined (TBD). Tactics training and locations for HC squadron (Mission Planning/Post Mission Analysis) personnel is currently under review. The follow-on training system that will be delivered to the training activities will be developed under contract as Computer Based Training (CBT) in the format required by the training activities.

a. Initial Training. The Contractor will develop and conduct operator and maintenance initial training for Navy Test and Evaluation personnel in support of TECHEVAL and OPEVAL. In order to meet Fleet introduction requirements, the Contractor will also develop and conduct operator and maintenance initial training for the FRS and Naval Air Maintenance Training Unit (NAMTRAU) instructors, and an initial cadre of Fleet operator, maintenance, and tactics (Mission Planning/Post Mission Analysis) personnel. It is expected that the following courses will be required.

Note: Initial training requirements for tactics personnel are currently under review.

(1) Pre-TECHEVAL and OPEVAL.

Title	**AN/AQS-20A Pre-TECHEVAL and OPEVAL Training Courses**
Description	Provides familiarization training to selected personnel to sufficiently prepare for and support TECHEVAL and OPEVAL. This will include controls and indications, aircraft rigging/de-rigging, certification procedures, aircrew stream, tow, and recovery procedures, console operating procedures, safety/emergency procedures and system tactics.
Location	NSWCCSS Panama City
Length	TECHEVAL: 23 Days OPEVAL: 42 Days
RFT date	TECHEVAL: March 04 OPEVAL: November 04

TTE/TD	AN/AQS-20A System, MH-60S
Prerequisites	Selected Government and Navy personnel in support of TECHEVAL and OPEVAL

(2) Operator. Instructors and initial cadre Fleet personnel.

Title.....	**AN/AQS-20A Sonar Mine Detecting Set Operation and Tactics Initial Training (Pilot)**
Description.....	Provides instructors and an initial cadre of Fleet pilots the basic skills, tactics and techniques necessary to employ the AN/AQS-20A.
Location.....	NSWCCSS Panama City
Length.....	TBD
RFT date.....	April 05
TTE/TD.....	AN/AQS-20A System, MH-60S
Prerequisites.....	Pilot qualified in the MH-60S helicopter

Title.....	**AN/AQS-20A Sonar Mine Detecting Set Operator Initial Training**
Description.....	Provides instructors and an initial cadre of Fleet aircrewmen the basic skills necessary to stream, operate, and recover the AN/AQS-20A. Includes Sonar contact recognition training.
Location.....	NSWCCSS Panama City
Length.....	TBD
RFT date.....	April 05
TTE/TD.....	AN/AQS-20A System, MH-60S
Prerequisites.....	Aircrewman qualified in the MH-60S helicopter, APO 8205

(3) Tactics. Instructors and initial cadre Fleet personnel.

Title.....	**AN/AQS-20A Sonar Mine Detecting Set Tactics, Mission Planning and Post Mission Analysis Initial Training**
Description.....	Provides instructors and initial cadre of Fleet Tactics personnel the training necessary to perform AMCM Mission Planning and Post Mission Analysis for the AN/AQS-20A system.
Location.....	NSWCCSS Panama City
Length.....	TBD
RFT date.....	April 05
TTE/TD.....	TBD
Prerequisites.....	AMCM Tactics personnel

(4) Maintenance. Instructors and initial cadre Fleet personnel.

Title.....	**AN/AQS-20A Sonar Mine Detecting Set Electronic Systems Organizational and Intermediate Level Maintenance Initial Training**
Description.....	Provides instructors and an initial cadre of Fleet personnel the skills, knowledge, and techniques required to perform O-Level and I-Level maintenance and test procedures on electronic components of the AN/AQS-20A.
Location.....	TBD
Length.....	TBD
RFT date.....	April 05
TTE/TD.....	AN/AQS-20A System, ILTE
Prerequisites.....	AT 83XX

Title.....	**AN/AQS-20A Sonar Mine Detecting Set Aircraft Configuration Initial Training**
Description.....	Provides instructors and an initial cadre of Fleet maintenance personnel with the skills, knowledge, and techniques required to properly configure the aircraft and operate BITE for the AN/AQS-20A mission.
Location.....	TBD
Length.....	TBD
RFT date.....	April 05
TTE/TD.....	AN/AQS-20A, CC, CSTRS, MH-60S
Prerequisites.....	AO 8378, AT 83XX

b. Follow-on Training. Follow-on training for operators (pilots and aircrewmen) will be conducted at the MH-60S FRS HC-3 NAS North Island and HC-2 NS Norfolk. Follow-on training for maintenance personnel will be conducted at MTU-1044, NS Norfolk and MTU-1022, NAS North Island. Training for HM tactics (Mission Planning/Post Mission Analysis) personnel will be provided through a Stand-Alone course at a location and activity TBD. Tactics training and locations for HC squadron (Mission Planning/Post Mission Analysis) personnel is currently under review. The following are proposed courses:

(1) Operator.

Title	**MH-60S Pilot Airborne Mine Countermeasures Systems Familiarization and Operational Flight Trainer/Weapons Tactical Trainer**
CIN	D/E-2C-XXX1 (Pipeline E-2C-3100, E-2C-3102)
Model Manager....	HC-3, NAS North Island, California
Description.....	This course provides the training necessary for qualifying MH-60S Pilots to perform assigned AMCM missions. Academic instruction consists of Aircrew Coordination Training, AMCM systems familiarization, AMCM system stream and recovery procedures, minefield navigation, and AMCM tactics. Flight simulator training consists of practical application of AMCM systems, tactics, and minefield navigation. Upon completion, the graduate will be able to perform as an MH-60S AMCM Pilot in a squadron environment.
Location	HC-2, NS Norfolk, Virginia HC-3, NAS North Island, California

Length.....	TBD
RFT date	HC-2 - TBD
	HC-3 - June 05
Skill identifier.....	1311
TTE/TD	TBD
Prerequisites.....	Designated Service Group II Naval Aviator
	Designated Naval Helicopter Pilot
	E-2C-3101, MH-60S CAT I Fleet Replacement Pilot
	D/E-2D-0039, Survival, Evasion, Resistance, and Escape

Title	**AN/AQS-20A Sonar Mine Detecting Set Operator**
CIN	C-050-XXX2 (Pipeline E-050-3100, E-050-3102)
Model Manager....	HC-3, NAS North Island, California
Description.....	This course provides MH-60S aircrewmen the basic skills necessary to operate the AN/AQS-20A and perform sonar and EOID contact recognition.
Location	HC-2, NS Norfolk, Virginia
	HC-3, NAS North Island, California
Length.....	TBD
RFT date	HC-2 - TBD
	HC-3 - June 05
Skill identifier.....	APO NEC 8205
TTE/TD	TBD
Prerequisites.....	Q-050-1500, Naval Aircrew Candidate School
	Q-050-0600, Aviation Rescue Swimmer School
	E-050-3101, MH-60S Category I MMH Aircrewman
	D/E-2D-0039, Survival, Evasion, Resistance, and Escape

(2) Tactics.

Title.....	**Airborne Mine Countermeasures MCM Planning, Post Mission Analysis, MCM Evaluation**
CIN.....	C-102-XXX3 (Stand Alone Class F)
Model Manager....	TBD
Description.....	Provides the training necessary to operate AMCM C4I systems, properly plan AMCM missions, and conduct Post Mission Analysis for a variety of AMCM weapon systems assigned to Fleet activities. Training will include: ° AMCM Systems Tactics/Employment Theory ° MEDAL ° Sonar Contact Recognition/Image Analysis ° AMCM C4I ° Navy H60 Mission Planning Station ° Mine Threat Awareness Upon completion, the graduate will be able to plan AMCM missions, conduct Post Mission Analysis, and operate AMCM C4I systems in a squadron environment.
Location.....	TBD
Length.....	TBD
RFT date.....	June 05
Skill identifier.....	OS, Fleet AMCM Tactics Personnel
TTE/TD.....	TBD
Prerequisites.....	J-221-0011, Operations Specialist Class A1

(3) Maintenance.

Title.....	**AN/AQS-20A Sonar Mine Detecting Set Electronic Systems Organizational and Intermediate Level Maintenance**
CIN.....	C-102-XXX4 (Track D/E-102-XXX1)
Model Manager....	TBD
Description.....	Provides ATs with the skills, knowledge, and techniques required to perform aircraft configuration, O-Level and I-Level maintenance, and test procedures on the AN/AQS-20A. Upon completion, the technician will be capable of configuring the aircraft, performing O-Level and I-Level maintenance, and operate BITE for the AN/AQS-20A under limited supervision.
Location.....	MTU-1022, NAS North Island, California MTU-1044, NS Norfolk, Virginia
Length.....	TBD
RFT date.....	MTU-1022 - June 05 MTU-1044 - TBD
Skill identifier.....	AT 83XX
TTE/TD.....	TBD
Prerequisites.....	C-100-2020, Avionics Common Core Class A1 C-100-2018, Avionics Technician O-Level Class A1 or C-100-2017, Avionics Technician I-Level Class A1

Title.....	**MH-60S AMCM Weapon Systems Mission Configuration**
CIN.....	C-646-XXX5 (Track D/E-646-0840)
Model Manager....	TBD
Description.....	Provides the technician with the skills, knowledge, and techniques required to properly configure the MH-60S for various AMCM missions. Upon completion, the technician will be capable of configuring the aircraft for any AMCM mission under limited supervision.

Location..... MTU-1022, NAS North Island, California

MTU-1044, NS Norfolk, Virginia

Length..... TBD

RFT date..... MTU-1022 - June 05

MTU-1044 - TBD

Skill identifier..... AO 8378

TTE/TD..... TBD

Prerequisites..... C-646-2011, Aviation Ordnanceman Common Core Class A1

C-646-2012, Aviation Ordnanceman Air Wing Strand Class A1

c. Student Profiles.

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
1311	Q-2A-0001, Primary Flight Training Q-2A-0010, Joint T-34C/T-6A Joint Primary Aircraft Training System (JPATS) Intermediate Flight Training Q-2A-0015, Undergraduate Helicopter Pilot Training D/E-2D-0039, Survival, Evasion, Resistance, and Escape Training J-495-0413, Shipboard Aircraft Firefighting
AO 8378	C-646-2011, Aviation Ordnanceman Common Core Class A1 C-646-2012, Aviation Ordnanceman Air Wing Strand Class A1
AT 83XX	C-100-2020, Avionics Common Core Class A1 C-100-2018, Avionics Technician O-Level Class A1, and or C-100-2017, Avionics Technician I Level Class A1
APO 8205	Q-050-1500, Naval Aircrewman Candidate School Q-050-0600, Aviation Rescue Swimmer School D/E-2D-0039, Survival, Evasion, Resistance, and Escape
OS 03XX	J-221-0011, Operations Specialist Class A1

d. Training Pipelines. The following identifies the proposed establishment of a new training track, courses, and revisions to existing training tracks. Due to this being new development training, the extent of impact to existing and planned training tracks is unknown at this time. Two new NEC codes are proposed, AT 83XX, MH-60S AMCM Systems Maintenance Technician Organizational and Intermediate Level and OS 03XX, AMCM Operations Specialist. Details of the individual training tracks, courses, and revisions to the existing training tracks are listed in Appendix B.

(1) E-2C-3100, MH-60S Fleet Replacement Pilot Category I Pipeline

(2) E-2C-3102, MH-60S Fleet Replacement Pilot Category II Pipeline

(3) E-050-3100, MH-60S Fleet Replacement Aircrew Category I Pipeline

(4) E-050-3102, Fleet Replacement Aircrewman Category II Pipeline

(5) C-102-XXX3, Airborne Mine Countermeasures MCM Planning, Post Mission Analysis, MCM Evaluation. Stand-Alone course.

(6) D/E-102-XXX1, MH-60S AMCM Systems Organizational and Intermediate Maintenance

(7) D/E-646-0840, H-60 Armament and Related Systems Organizational Maintenance Track

I. ONBOARD (IN-SERVICE) TRAINING.

1. Proficiency or Other Training Organic to the New Development.

a. Maintenance Training Improvement Program. Current planning is to adopt the Aviation Maintenance Training Continuum System (AMTCS) concepts to replace the Maintenance Training Improvement Program (MTIP). AMTCS is scheduled to begin full implementation for fleet deployment in November 2003.

b. Aviation Maintenance Training Continuum System. The AMTCS will provide career path training to the Sailor or Marine from their initial service entry to the end of their military career. AMTCS concepts will provide an integrated system that will satisfy the training and administrative requirements of both the individual and the organization. The benefits will be manifested in the increased effectiveness of the technicians and the increased efficiencies of the management of the training business process. Where appropriate, capitalizing on technological advances and integrating systems and processes can provide the right amount of training at the right time, thus meeting the CNO's mandated "just-in-time" training approach.

Technology investments enable the development of several state-of-the-art training and administrative tools: Interactive Multimedia Instruction (IMI) for the technicians in

the Fleet in the form of Interactive Courseware (ICW) with Computer Managed Instruction (CMI) and Computer Aided Instruction (CAI) for the schoolhouse.

Included in the AMTCS development effort is the Aviation Maintenance Training Continuum System - Software Module, which provides testing [Test and Evaluation], recording [Electronic Certification Qualification Records], and a Feedback system. The core functionality of these AMTCS tools are based and designed around the actual maintenance-related tasks the technicians perform, and the tasks are stored and maintained in a Master Task List data bank. These tools are procured and fielded with appropriate Commercial-Off-The-Shelf (COTS) hardware and software, i.e., Fleet Training Devices - Laptops, PCs, Electronic Classrooms, Learning Resource Centers (LRC), operating software, and network software and hardware.

Upon receipt of direction from OPNAV (N789H), AMTCS concepts are to be implemented and the new tools integrated into the daily training environment of all participating aviation activities and supporting elements. AMTCS will serve as the standard training system for aviation maintenance training within the Navy and Marine Corps, and is planned to supersede the existing MTIP and Maintenance Training Management and Evaluation Program (MATMEP) programs.

The AN/AQS-20A training system is expected to encompass the requirements of AMTCS.

2. Personnel Qualification Standards. Currently no formal Personal Qualification Standards are planned for the AN/AQS-20A.

3. Other Onboard or In-Service Training Packages. On-Board training in the form of portable CBT/ICW will be developed to provide operators a mission skill development capability and a means to maintain proficiency operating the AN/AQS-20A system. This is an invaluable tool for those aircrews that may experience extended periods between mission flights. Similar proficiency support training will also be developed for maintenance and tactics (Mission Planning/Post Mission Analysis) personnel**.** On-the-Job Training will be available at the Fleet level. Detailed information on this training will be identified in a future update to this NTSP.

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Numbers.

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N-00024-99-C-6337	Raytheon Company Electronic Systems Naval and Maritime Integrated Systems	1847 W Main Rd Portsmouth, RI 02871

2. Program Documentation. Draft versions of the ALSP and MP have been completed. The MP will be updated as required to reflect system configuration changes as the program matures.

3. Technical Data Plan. Technical Manuals will be prepared in accordance with direction provided by the Naval Air Technical Data and Engineering Service Command and as outlined in the Technical Manual Contract Requirement 01-015. Manuals will be developed and issued in Interactive Electronic Technical Manual format.

4. Test Sets, Tools, and Test Equipment. The initial Support and Test Equipment (S&TE) listing identified in the AN/AQS-20A ALSP was derived from the AN/AQS-20 system as a starting point for developing the resource requirements for the AN/AQS-20A system. The initial analysis results indicate that a majority of the AN/AQS-20A system S&TE requirements are classified as CSE due to their use with other existing AMCM systems. The PSE identified consists of equipment required to fault isolate and troubleshoot the common towed body off the aircraft. Required S&TE will be available to support initial, follow-on training, and Fleet deliveries. The Original Equipment Manufacture and NSWCCSS are currently verifying the requirements for this equipment.

5. Repair Parts. Supportability analyses consisting of maintenance planning and repair analysis (Reliability Centered Maintenance and LORA) have been generated and the initial documents are being used to determine the range and depth of spares and materials to support the AN/AQS-20A towed body. As CSTRS and the CC are engineered and developed, an analysis will be conducted to determine the spares and materials required to support the AN/AQS-20A Mission Kit.

6. Human Systems Integration. The Human Systems Integration Plan is currently under development at NSWCCSS. Information from this plan will be included in future updates to this NTSP.

K. SCHEDULES.

1. Installation and Delivery Schedules. The table below indicates the number of planned system deliveries per FY. Individual squadron deliveries have not been identified.

DELIVERY SCHEDULE							
FY03	**FY04**	**FY05**	**FY06**	**FY07**	**FY08**	**FY09**	**FY10**
2	1	0	4	3	4	8	8

2. Ready for Operational Use Schedule. The AN/AQS-20A will be Ready For Operational Use (RFOU) upon delivery to the squadron.

3. Time Required to Install at Operational Sites. The AN/AQS-20A will be delivered RFOU, but will not be permanently installed in the aircraft. Installation of the AN/AQS-20A system on the MH-60S helicopter will be an O-Level maintenance function having a threshold of four hours and an objective of two hours to complete. Removal times for the system will be no greater than the installation time noted above.

4. Foreign Military Sales and Other Source Delivery Schedule. NA.

5. Training Device and Technical Training Equipment Delivery Schedule. Although detailed information on Training Devices (TD) and Technical Training Equipment (TTE) is currently under development it is expected the following TDs and TTE will be required.

(a) Operator:

DEVICE	DATE REQUIRED
Common Console	June FY05
Towed Body (Dummy) with Tow Cable	June FY05
CSTRS	June FY05
Stream/Recovery Trainer	June FY05

(b) Maintenance:

DEVICE	DATE REQUIRED
Common Console	June FY05
Towed Body (Task Trainer)	June FY05
ILTE	June FY05
CSTRS	June FY05
Aircraft Configuration Trainer	June FY05

(c) Tactics:

DEVICE	DATE REQUIRED
MEDAL	June FY05
Navy H60 Mission Planning Station	June FY05
Post Mission Analysis Station	June FY05

L. GOVERNMENT-FURNISHED EQUIPMENT AND CONTRACTOR-FURNISHED EQUIPMENT TRAINING REQUIREMENTS. NA.

M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS.

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
AN/AQS-20 Navy Training Plan	ANAP-0001-PMS210-PD	PMS210	Draft Aug 1997
AN/AQS-20A MP	AM-061	PMS210	Draft Mar 2001

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
AN/AQS-14A NTSP	N75-NTSP-P-30-9903/A	PMS210	Approved Apr 2001
AN/AQS-20A TEMP	053-03	PMS210	Draft May 2001
AN/AQS-20A ALSP	AM-061	PMS210	Draft Jun 2001
H-60 Armed Helicopter Program NTSP	N88-NTSP-A-50-9805/A	PMA299	Approved Mar 2002
Operational Requirements Document for an AMCM Multi-Mission HC Helicopter	Annex B (Revision 1)	CNO N752E	Approved Aug 2002
MH-60S NTSP	N88-NTSP-A-50-9902A/A	PMA299	Approved Jan 2003

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APPENDIX A - POINTS OF CONTACT

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Appendix B to the AN/AQS-20A NTSP identifies the proposed establishment of new training tracks, training courses, and revisions to existing tracks. Due to this being new development training, the extent of impact to existing and planned training tracks is unknown at this time. RFT dates below have been estimated based on current program information.

Note: Dual site training for the AMCM systems maintenance technicians, as identified in this NTSP, is anticipated. Currently, training site throughput has not been determined. It is expected, the MER, once complete, will provide the information needed for developing the throughput numbers used to determine if dual site training is required.

1. E-2C-3100, MH-60S Fleet Replacement Pilot Category I Pipeline. Proposed revision:

(a) Add **D/E-2C-XXX1**, MH-60S Pilot Airborne Mine Countermeasures Systems Familiarization and Operational Flight Trainer/Weapons Tactical Trainer. Course length is TBD. Establish this course at HC-3, NAS North Island and HC-2, NS Norfolk. HC-3 RFT date with AN/AQS-20A training information June 2005. HC-2 RFT date is TBD.

(b) Change to Category I track length is TBD.

2. E-2C-3102, MH-60S Fleet Replacement Pilot Category II Pipeline. Proposed revision:

(a) Add **D/E-2C-XXX1**, MH-60S Pilot Airborne Mine Countermeasures Systems Familiarization and Operational Flight Trainer/Weapons Tactical Trainer. Course length is TBD. Establish this course at HC-3, NAS North Island and HC-2, NS Norfolk. HC-3 RFT date with AN/AQS-20A training information is June 2005. HC-2 RFT date is TBD.

(b) Change to Category II track length is TBD.

3. E-050-3100, MH-60S Fleet Replacement Aircrew Category I Pipeline. Proposed revision:

(a) Add **C-050-XXX2**, AN/AQS-20A Sonar Mine Detecting Set Operator. Course length is TBD. Establish this course at HC-3, NAS North Island and HC-2, NS Norfolk. HC-3 RFT date is June 2005. HC-2 RFT date is TBD.

(b) Change to Category I track length is TBD.

4. E-050-3102, MH-60S Fleet Replacement Aircrewman Category II Pipeline. Proposed revision:

(a) Add **C-050-XXX2**, AN/AQS-20A Sonar Mine Detecting Set Operator. Course length is TBD. Establish this course at HC-3, NAS North Island and HC-2, NS Norfolk. HC-3 RFT date is June 2005. HC-2 RFT date is TBD.

(b) Change to Category II track length is TBD.

5. C-102-XXX3, Airborne Mine Countermeasures MCM Planning, Post Mission Analysis, MCM Evaluation Course. Training for squadron tactics personnel will be resident in a Stand-Alone course to be established. A new OJT awardable NEC code 03XX, AMCM Operations Specialist will be established. This NEC will be awarded after successful completion of the Stand-Alone course and approximately six months of OJT at the squadron. No training track required.

(a) Establish new course, **C-102-XXX3**, Airborne Mine Countermeasures MCM Planning, Post Mission Analysis, MCM Evaluation. Location and training activity TBD. Course length is TBD. Establish this course as a Stand-Alone. RFT date with AN/AQS-20A training information is June 2005.

6. D/E-102-XXX1, MH-60S AMCM Systems Organizational and Intermediate Maintenance.

(a) Establish new track, **D/E-102-XXX1**, MH-60S AMCM Systems Organizational and Intermediate Maintenance. Track length TBD. Establish this track at MTU-1022, NAS North Island and MTU-1044, NS Norfolk. MTU-1022 RFT date is June 2005. MTU-1044 RFT date is TBD. Upon the students successful completion award NEC code 83XX, MH-60S AMCM Systems Maintenance Technician Organizational and Intermediate Level.

(b) Add **C-102-XXX4**, AN/AQS-20A Sonar Mine Detecting Set Electronic Systems Organizational and Intermediate Level Maintenance. Course length is TBD. Establish this course at MTU-1022, NAS North Island and MTU-1044, NS Norfolk. MTU-1022 RFT date is June 2005. MTU-1044 RFT date is TBD.

(c) Total track length is TBD.

7. D/E-646-0840, H-60 Armament and Related Systems Organizational Maintenance Track. Proposed revision:

(a) Add **C-646-XXX5**, MH-60S AMCM Weapon Systems Mission Configuration. Course length is TBD. Establish this course at MTU-1022, NAS North Island, and MTU-1044, NS Norfolk. MTU-1022 RFT date is June 2005. MTU-1044 RFT date is TBD.

(b) Change to total track length is TBD.